

Application No. 09/935,337
Amendment Dated November 7, 2003
Reply to Office Action of August 7, 2003

REMARKS/ARGUMENTS:

Claims 1 – 10, 17 – 34 and 45 – 51 and 73 – 85 are currently pending in the application, with claims 1, 17, 26, 45 and 76 being independent. Claims 11 – 16, 35 – 44 and 52 – 72 have been canceled due to the upheld restriction requirement. Claim 1 is amended. Claims 73 – 85 are added. Proposed drawing corrections for FIGS. 1 – 3, 5 – 8 and 11 – 16 are attached. No new matter has been added.

Claim 1 is amended to recite that at least a portion of the at least one fastener is between an inner surface and an outer surface of the meltable member. Dependent claims 73 – 75 are also added and depend from amended independent claim 1.

New independent claim 77 is added. Claim 77 corresponds to objected to claim 2, which was indicated as allowable if rewritten in independent form including all the limitations of the base claim and including the recitation that the at least one fastener at least partially surrounds a portion of the heating element. Claims 78 – 85 depend from independent claim 77. Since claim 2 was indicated as being allowable if rewritten in independent form including all the limitation of the base claim, and claim 77 corresponds to claim 2 rewritten in independent form including all the limitations of the base claim, claim 77 is allowable. Claims 78 – 85, being dependent upon independent claim 77, respectively, are also allowable for the above reasons. Moreover, claims 78 – 85 are not anticipated nor rendered obvious by the cited patents, particularly within the overall claimed combination. Therefore, new claims 77 – 85 are allowable over the cited prior art of record.

RESTRICTION AND/OR ELECTION REQUIREMENTS

The restriction and/or election requirements initially set forth in the April 28, 2003 Office communication have been upheld and made final.

Accordingly, Applicant has canceled claims 11 – 16, 35 – 44, and 52 – 72 that are subject to the restriction and/or election requirements.

OBJECTION TO THE DRAWINGS

The drawings are objected to because FIGS. 1 – 3, 5 – 8 and 10 – 16 are not properly cross-hatched to denote plastic materials in accordance with MPEP 608.02.

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In response to the objection to the drawings, Applicant submits herewith proposed drawing corrections to FIGS. 1 – 3, 5 – 8 and 11 – 16 on Sheets 1 – 3 and 5 – 7 for the Examiner's approval. Proposed corrections to the drawings are indicated in red ink. The drawings have been corrected to have appropriate cross-hatching to denote plastic materials. The attached sheets of drawings include changes in red to FIGS. 1 – 3, 5 – 8 and 11 – 16. Sheets 1 – 3 and 5 – 7 replace the originally filed drawings sheets 1 – 3 and 5 – 7. No new matter has been added to the drawings.

No drawing corrections are made to FIG. 10, which the Examiner noted as having improper cross-hatching. As noted in paragraph [0024], FIG. 10 is a front view of a welding ring received within a bell portion of a pipe. FIG. 10 does not have a cross-sectional view that requires cross-hatching, therefore no drawing corrections need to be made to FIG. 10.

Accordingly, the objection to the drawing is obviated.

CLAIM REJECTION UNDER 35 U.S.C. § 102(b)

Claims 1 and 6 – 8 are rejected under 35 U.S.C. § 102(b) as being anticipated by JP9-257183. Applicant respectfully traverses this rejection.

Amended independent claim 1 recites an assembly for making an electrofusion weld joint having a meltable member, at least one fastener, a heating element secured to the meltable member by the at least one fastener, and at least a portion of the at least one fastener is between an inner surface and an outer surface of the meltable member.

JP9-257183 clearly does not disclose, teach or suggest all the limitations of claims 1 and 6 – 8.

JP9-257183 discloses a meltable member (pipe 1), a heating element 4 and a fastener (press-fitting body 9) that temporarily holds the heating element against an inner wall of the meltable member. The heating element is inserted in a pipe and positioned on the inner wall of the pipe. The heating fixture 6 (FIG. 5) is then inserted in the pipe so that the heating fixture holds the heating element against the inner wall of the pipe. The heating fixture is then heated and expanded, thereby softening the inner wall of the pipe and embedding the heating element in the softened inner wall of the pipe, as shown in FIGS. 6 and 7. The heating fixture 6, including press-fitting body 9, is then reduced in size and removed from the pipe.

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JP9-257183 does not show at least a portion of at least one fastener between an inner surface and an outer surface of a meltable member to secure the heating element to the meltable member, as recited in amended independent claim 1. The fastener disclosed in JP9-257183 is merely inserted within the meltable member and then withdrawn once the heating element has been secured to the meltable member by a heating and pressing process. At no point during the process of securing the heating element to the meltable member disclosed in JP9-257183 is at least a portion of the press-fitting body (fastener) between the inner and outer surfaces of the meltable member as recited in amended independent claim 1. To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference." Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since at least a portion of at least one fastener being between an inner and an outer surface of the meltable member is not taught in the cited JP9-257183 reference, amended independent claim 1 is not anticipated by JP9-257183.

Furthermore, the "fastener" taught in JP9-257183, press-fitting body 9, is intended to be removed from the meltable member once the heating element has been secured. Therefore, JP9-257183 actually teaches away from having at least a portion of at least one fastener that is between inner and outer surfaces of the meltable member to secure the heating element to the meltable member. Therefore, having at least a portion of at least one fastener being between inner and outer surfaces of the meltable member is not suggested by or obvious in view of the cited JP9-257183 reference.

Therefore, JP9-257183 does not disclose nor render obvious the features of Applicant's invention recited in independent claim 1. Since JP9-257183 does not disclose, teach, or suggest all of the limitations in amended independent claim 1, Applicant submits that claim 1 is allowable.

Claims 6 – 8, being dependent upon independent claim 1, respectively, are also allowable for the above reasons. Moreover, claims 6 – 8 are not anticipated nor rendered obvious by the cited patent, particularly within the overall claimed combination. For example, the meltable member being made of a thermoplastic material of claim 6; the meltable member being a pipe having a bell end of claim 7; and the bell end of the pipe being

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tapered of claim 8; are not anticipated or rendered obvious by the cited patent, particularly within the overall claimed combination.

CLAIM REJECTION UNDER 35 U.S.C. § 103

Claims 3, 4 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over JP9-257183 in view of GB939664. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP9-257183 in view of GB939664 and in further view of U.S. Patent No. 5,324,920 to Nakao (the “’920 Nakao patent”). Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP9-257183 in view of U.S. Patent No. 3,788,928 to Wise (the “’928 Wise patent”). Applicant respectfully traverses these rejections.

The JP9-257183 reference clearly does not disclose, teach or suggest all the limitations of amended independent claim 1, as discussed above. Therefore, the JP9-257183 reference cannot be used in any combination to disclose nor render obvious any of the claims dependent upon amended independent claim 1, as set forth by the Examiner for dependent claims 3, 4, 5, 8 and 10.

The GB939664 reference is cited for disclosing an S-shaped heating element. U.S. Patent No. 5,324,920 to Nakao is cited for disclosing mounting the heating element at spaced intervals at each bend. U.S. Patent No. 3,788,928 to Wise is cited for disclosing a pipe having a spigot end. However, none of these cited references cures the deficiency in JP9-257183 noted above regarding the absence of at least one fastener having at least a portion between the inner and outer surfaces of the meltable member to secure the heating element to the meltable member.

Therefore, JP9-257183 in combination with the GB939664 reference, the ‘920 Nakao patent and the ‘928 Wise patent does not disclose nor render obvious the features of Applicant’s invention recited in amended independent claim 1. Since JP9-257183 in combination with the GB939664 reference, the ‘920 Nakao patent and the ‘928 Wise patent does not disclose, teach, or suggest all of the limitations in amended independent claim 1, Applicant submits that claim 1 is allowable.

Claims 3, 4, 5, 8 and 10, being dependent upon amended independent claim 1, respectively, are also allowable for the above reasons. Moreover, claims 3, 4, 5, 8 and 10 are not anticipated nor rendered obvious by the cited patent, particularly within the overall

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claimed combination. For example, the heating element being substantially S-shaped of claim 3; the heating element being substantially V-shaped of claim 4; the at least one fastener secures the heating element to the meltable member at each bend of the substantially S-shaped heating element of claim 5; the bell end of the pipe being tapered of claim 8; and the meltable member being a pipe having a spigot end of claim 10; are not anticipated or rendered obvious by the cited patents, particularly within the overall claimed combination.

Allowable Subject Matter

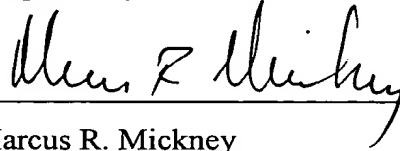
Applicants note with appreciation that objected to claim 2 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As discussed above, new independent claim 77 corresponds to objected to claim 2 including all the limitations of the base claim and including an additional recitation.

Claims 17 – 34 and 45 – 51 are indicated as being allowable over the cited prior art of record.

* * *

In view of the foregoing comments, Applicant respectfully submits that claims 1 – 10, 17 – 34, 45 – 51 and 73 - 85 are allowable over the cited patents. Prompt and favorable action is solicited.

Respectfully Submitted,



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